Habitat management for

WHITE-TAILED AND MULE DEER

In Kansas

Two species of deer occur in the state. The white-tailed deer (*Odocoileus virginianus*) occurs throughout the state in timbered areas but is most numerous in the eastern two-thirds of the state (Fig. 1). The mule deer (*Odocoileus heminonus*) occurs mainly in the western portion of the state, but may occasionally be seen in the extreme eastern part of the state.

The two types of deer are readily distinguished by their appearance and habits. The white-tailed deer is named for its large tail, with a stark white underside, which is usually upraised as the deer bounds off. The smooth-flowing gallop of the whitetail contrasts sharply with the stiff-legged, bouncing gait of the mule deer. The ears of the whitetail are relatively small compared to the conspicuously large, mule-like ears which have given the mule deer its name.

Antlers of the whitetail have vertical undivided prongs arising from a main beam, while mule deer antlers fork or branch from a prong. The size of antlers is not an indication of age, but rather an indication of nutrition and quality of habitat.

Whitetail

Mule

USDA-Soil Conservation Service, Salina, Kansas

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Sizes of deer vary by area according to the quality and quantity of available habitat. Adult bucks can weigh 90 to 300 pounds but average about 150 pounds, while does can weigh 70 to 175 pounds but average about 100 pounds.

All deer shed their hair twice each year, during the autumn and spring seasons. The winter hair is composed of two layers which includes an undercoat of soft hair and an overcoat of long kinky hollow hair which provides excellent insulation during winter months.

Bucks grow a new set of antlers annually, shedding them in mid-winter. Large "trophy" antlers may reach or exceed 30 inches in both length and spread, with four or more points to a side. As breeding season approaches, the buck rubs the dried and itching velvet covering off by polishing the antlers against the trunks of trees and shrubs. A person cannot tell a buck's age by his antlers. Antler development is not an indication of age but rather an indicator of nutrition and the amount of food consumed. The only reliable method of determining the age of a deer is by cross-section examination of its teeth.

Breeding, referred to as "rut," commences in mid-October, with the peak normally in mid to late November. Deer are polygamous. Bucks usually serve more than one doe if available. There is considerable competition between bucks for available does. The strongest, most vigorous bucks are usually the victors.

Approximately 200 days after breeding, usually in May and June, fawns are born. Does having young for the first time usually bear only a single fawn; thereafter, she will usually have twins and occasionally triplets. At birth each fawn weighs between four and seven pounds; bucks are usually slightly heavier. Activity is low during the first few days, although fawns are capable of walking a few steps shortly after birth. Vegetation is added to the milk diet when they are two to three weeks old. Normally, fawns are weaned at about four months, but they are capable of surviving without milk in three months or less.

Mortality

Deer have been known to live 20 years or more, but the bulk of the population in a well managed herd is usually in the 2½- to 7½-year class. Deer are subject to several diseases and parasites; however, well nourished deer on good year-round range are not susceptible to high mortality from disease or heavy infestations of parasites.

Foxes, bobcats, and coyotes take deer when and if they can, but the most serious deer predator today is the free-running dog.

Many deer are killed by vehicles on roads and highways. Some devices have been tried to reduce this problem, but none have proven to be entirely satisfactory.

Illegal harvest of deer can be a serious factor in local population growth.

Food

Deer prefer timbered areas for their homes, but occasionally may be seen in grasslands. They usually select the edges of timbered areas rather than extensive dense stands of trees. A good year-round food supply with a wide variety of desirable plants, well interspersed, with escape cover and water is essential.

Deer are considered to be primarily browsers--that is they eat parts of shrubs and trees--but their diets vary considerably by season and area. During the winter, a large percentage of their diet is composed of leaves, buds, twigs, and fruits of woody vegetation. Succulent grasses, legumes, and forbs are eaten in quantity when available. While deer may eat well over a hundred species of plants, usually 15 to 20 species make up the bulk of the annual diet.

Deer require from 7 to 10 pounds of food per day. In Kansas, farm crops, particularly corn, sorghum, winter wheat, alfalfa, and soybeans, comprise the bulk of the year-round diet except in summer when green forbs become predominant.

Woody plants such as coralberry, green brier, poisonivy, apples, and oaks are of particular importance, while sumac, redcedar, dogwood, willow, hackberry, and several other species are used on occasion.

Cover

The primary limiting factor for deer in Kansas is suitable permanent cover. Greatest numbers of deer are found along stream courses with associated woody cover and an ungrazed understory. An overgrazed area with tall trees provides little in the way of food and would be used for cover only if there is nothing better.

No other big game animal tolerates people as well as deer. A remarkable number can inhabit a small patch of woods and adjoining fields almost undetected.

HABITAT MANAGEMENT SUGGESTIONS

Good deer management requires two essential considerations: (1) That the quality of the habitat, and especially the permanent cover component, be maintained or improved; and (2) That an adequate annual harvest (including both sexes when conditions warrant) occurs in order to avoid overpopulations which are likely to damage the habitat.

Deer management is usually undertaken on large areas, but it is possible to increase and improve total habitat if several landowners manage available small areas.

The key element in the development of deer habitat is interspersion, or the intermixing of the habitat types needed by deer.

The following suggestions will increase and/or improve deer habitat and may enhance population growth:

1. On open lands, protect existing woody escape and loafing cover or make 2- to 3-acre plantings of adapted woody species.

2. Make small (½-acre) clearings in heavily wooded areas and plant corn or sorghum for winter food.

3. Fence bottomland woods to provide for management. Occasional light grazing by livestock (every 2-3 years) can be beneficial to wildlife.

4. Implement a management program for rangelands which considers the dual and competitive uses of important forage species by both deer and domestic livestock.

5. Manage woodlands to provide canopy openings which permit understory grasses, forbs, and shrubs to grow.

6. Encourage an adequate harvest of any surplus deer. Deer cannot be stockpiled.

The Soil Conservation Service, local conservation districts, the Kansas Fish and Game Commission, and the Kansas State University Cooperative Extension Service offer competent guidance on soil, water, plants, and wildlife habitat management.

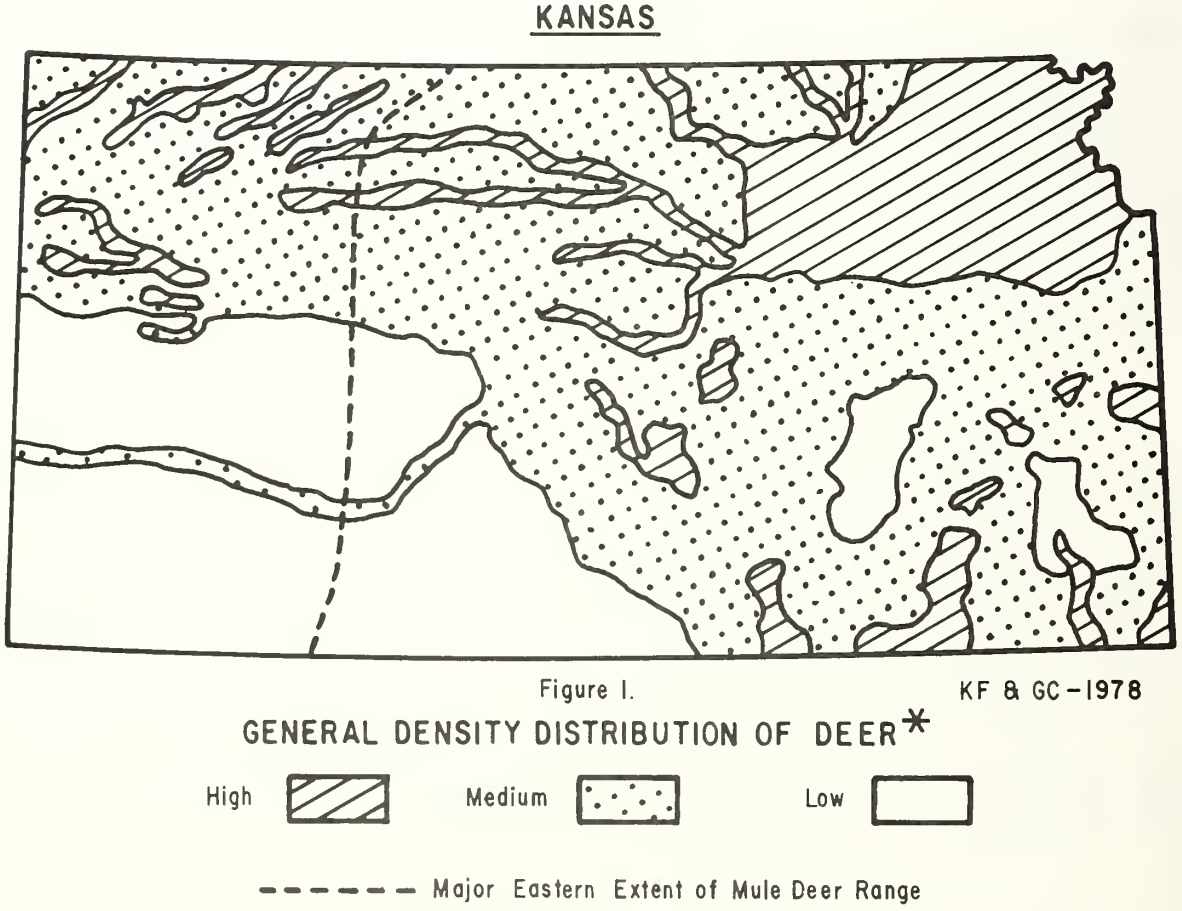

Figure 1. KF & GC-1978

* Locally abundant populations can occur in all areas where sufficient habitat is available.

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